USSN: 09/800,770

AMENDMENTS TO THE CLAIMS

Please amend claims 59 and 87 and cancel claim 91. A complete listing of the claims, including their current status, is set forth below. The amendments made herein are *supplemental* to those set forth in the responses filed on January 5, 2005 and April 12, 2005.

1. – 58. (Canceled)

59. (Currently amended) A retroviral vector comprising a nucleotide sequence encoding a fusion polypeptide comprising, from N-terminus to C-terminus:

a) a C-terminal domain of an intein;

b) a peptide;

c) an N-terminal domain of an intein;

wherein **the amino acid sequence of** said intein **or region thereof** ~~is of bacterial~~ **is obtained from a bacteria** or yeast ~~origin~~ and wherein said fusion protein is capable of undergoing a reaction to cyclize said peptide to produce a cyclic peptide in a mammalian cell.

60. (Previously presented) The retroviral vector of Claim 59, in which the encoded fusion polypeptide has altered splicing activity as compared to a wild-type intein.

61. (Previously presented) The retroviral vector of Claim 59 in which the peptide is a random peptide.

62. (Withdrawn) The retroviral vector of claim 59 in which the peptide of interest is derived from a cDNA library.

63. (Previously presented) The retroviral vector of Claim 59 in which the nucleotide sequence further encodes a reporter protein.

64. (Previously presented) The retroviral vector of Claim 63 in which the reporter protein is a fluorescent protein.

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65. (Previously presented) The retroviral vector of Claim 64 in which the fluorescent protein is a green fluorescent protein, a blue fluorescent protein, a yellow fluorescent protein or a red fluorescent protein.

66. (Withdrawn) The retroviral vector of Claim 63 in which the reporter protein is a transcription factor.

67. (Withdrawn) The retroviral vector of Claim 59 in which the nucleotide sequence further encodes a fusion partner.

68. (Withdrawn) A library of retroviral vectors of Claim 59 in which each vector in the library encodes a different fusion polypeptide.

69. (Withdrawn) The library of Claim 68 in which the peptide of interest of each different fusion polypeptide is different.

70. (Withdrawn) The library of Claim 69 in which the peptide of interest is a random peptide at least 3 amino acids in length.

71. (Withdrawn) The library of Claim 69 or 70 in which the C-terminal and N-terminal intein domains of each of the different fusion polypeptides are the same.

72. (Withdrawn) The library of Claim 69 or 70 in which the C-terminal and N-terminal intein domains of each of the different fusion polypeptides is different.

73. (Withdrawn) The library of Claim 68 in which the amino acid sequence of the C-terminal intein domain of each different fusion polypeptide includes a mutation as compared to the amino acid sequence of a wild-type C-terminal intein domain.

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74. (Withdrawn) The library of Claim 68 in which the amino acid sequence of the N-terminal intein domain of each different fusion polypeptide includes a mutation as compared to the amino acid sequence of a wild-type N-terminal intein domain.

75. (Withdrawn) The library of any one of Claims 72 to 74 in which the nucleotide sequence of each vector further encodes a reporter protein.

76. (Withdrawn) The library of Claim 75 in which the reporter protein is a fluorescent protein.

77. (Withdrawn) The library of Claim 76 in which the fluorescent protein is selected from the group consisting of a green fluorescent protein, a blue fluorescent protein, a yellow fluorescent protein and a red fluorescent protein.

78. (Withdrawn) The library of any one of Claims 72 to 74 in which the peptide of interest of each different fusion polypeptide is the same.

79. (Withdrawn) The library of Claim 78 in which the nucleotide sequence of each vector further encodes a reporter protein.

80. (Withdrawn) The library of Claim 79 in which the reporter protein is a fluorescent protein.

81. (Withdrawn) The library of Claim 80 in which the fluorescent protein is selected from the group consisting of a green fluorescent protein, a blue fluorescent protein, a yellow fluorescent protein and a red fluorescent protein.

82. (Withdrawn) A cell comprising the retroviral vector of Claim 59, or progeny thereof.

83. (Withdrawn) The cell of Claim 82 which is a eukaryotic cell.

84. (Withdrawn) The cell of Claim 82 which is a mammalian cell.

85. (Withdrawn) The cell of Claim 84 which is selected from the group consisting of a tumor cell, a liver cell, a hepatocyte, a mast cell and a lymphocyte cell.

86. (Withdrawn) The cell of Claim 84 which is a human cell.

87. **(Currently amended)** A retroviral vector comprising a nucleotide sequence encoding a fusion polypeptide comprising, from N-terminus to C-terminus:

a) a C-terminal domain of an intein;

b) a **random** peptide;

c) an N-terminal domain of an intein;

wherein **the amino acid sequence of** said intein **or a region thereof is obtained from** ~~is of~~ *Synechocystis* ~~origin~~ and wherein said fusion protein is capable of undergoing a reaction to cyclize said peptide to produce a cyclic peptide in a mammalian cell.

88. (Previously presented) The retroviral vector of claim 87, in which the encoded fusion polypeptide has altered splicing activity as compared to a wild-type *Synechocystis* intein.

89. (Previously presented) The retroviral vector of claim 87, wherein said intein is a *Synechocystis* DnaB intein.

90. (Previously presented) The retroviral vector of claim 87, wherein said intein is a *Synechocystis* DnaE intein.

91. (Cancelled)

92. (Previously presented) The retroviral vector of claim 87, wherein said nucleotide sequence further encodes a reporter protein.

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93. (Previously presented) The retroviral vector of claim 92 in which the reporter protein is a fluorescent protein.

94. (Previously presented) The retroviral vector of claim 93 in which the fluorescent protein is a green fluorescent protein, a blue fluorescent protein, a yellow fluorescent protein or a red fluorescent protein.

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